



**The Mandt System®**

Putting People First

**Chapter 7**  
**Conceptual Skills**

Medical Risk Factors

Recommended training time averages 1 – 1.5 hour(s)

Conceptual



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# Introduction

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The Mandt System physical interaction techniques are designed to protect everyone involved in the physical interaction. The techniques are specifically designed to avoid pain and reduce the risk of injury to the all persons involved. Stance, balance, moving, shifting, turning, redirecting and holding maneuvers are used in combination and transition to create the many variations needed to respond to situations requiring immediate protection from harm. These situations may involve assisting, guiding, holding, or restraining people.

All of the physical interaction techniques are to be used in a manner that is consistent with the philosophy of the Mandt System training programs. This means that the use of pain compliance techniques, self-defense techniques, and other submission-based approaches are not allowed in the Mandt System. The physical techniques have been specifically designed to support the philosophy of treating people with dignity and respect. We also stress a proactive approach to the use of restraint. This means that we are always working toward reducing the frequency and duration of the use of restraint.

Over the past thirty years much has been done to improve the safety of the physical interaction techniques. David Mandt and Associates has supported the on-going review and evaluation of physical maneuvers to improve the safety of the techniques. **The Training Faculty of David Mandt and Associates have made adjustments and improvements on a regular basis.** The most recent work in the area of restraint safety used by the Mandt System training is found in the recommendations from the Child Welfare League of America Best Practice Guidelines for Behavior Support and Intervention (CWLA, 2004) and the Evaluation of the Mandt System Physical Techniques (Van Ee, 2003).

David Mandt and Associates has collected literature and experience over the past 30 years in the development of the physical techniques used in the training. We are especially concerned with the prevention of restraint related deaths. Restraint related death can be prevented. We require that everyone who uses the technical (physical) skills in the Mandt System must complete this Chapter prior to being trained in any of the Technical Chapters. We also strongly recommend that everyone who is trained in the physical techniques of the Mandt System also has First Aid and CPR training.

None of the authors of this chapter are licensed medical professionals. If you have any concerns about the health and welfare of people, whether people who receive services or people who give services, seek the advice of a licensed medical professional or Ph.D. level bio-medical engineer.

## Learning Objectives

It is the intent of The Mandt System® that upon completing this chapter, the student will have:

1. Demonstrated understanding of the scope of restraint related injuries.
2. Identified the factors that increase the risk of restraint related injuries.
3. Described the high risk clusters for restraint related injuries and death.
4. Identified the safety factors that decrease the risk of restraint related injuries
5. Recognized restraint responses that indicate distress.
6. Explained the positional risks related to restraint responses.
7. Demonstrated understanding of how to monitor, assess, and maintain safety during restraint.

## The Risks of Restraint Use

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The risks of imposing physical restraint on other people have been well documented, from the Deadly Restraint series in the Hartford Courant in 1998 to articles by Mohr, Petti, and Mohr (2003) on the risks of restraint to a study by the Child Welfare League of America, chronicling injuries to residents at a rate of 3.5% of all restraints. Staff were injured at a rate of 5.8% of all restraints.

95% of the deaths due to manual restraint that were studied by the Hartford Courant were due to either prone or supine restraint. As a result of that and other factors, The Mandt System® no longer teaches prone or supine restraint in any of our training programs.

The medical risks of restraint have been thoroughly researched by the Child Welfare League of America, the Senate Bill 25 Work Group in Texas, and by Protection and Advocacy, Inc. (PAI) of California. Both of those studies are in the “Resources” section of the CD-ROM which accompanies each trainer manual. They are also available in the “Resources” section of our website.

We will be looking at the medical risks of restraint first in this chapter, using material from the Child Welfare League of America and Mohr, Petti, et. al. and Mohr, and other sources. It should be noted that while much of the information comes from the Child Welfare League of America, the risks of restraint noted apply to all people.

None of the staff of David Mandt and Associates are medical experts, and we recommend that any specific questions on the medical or physiological risks of restraint be directed to a physician or Ph.D. level biomedical engineer.

After reviewing the medical risks of restraint, we will be reviewing the psychological and emotional risks of restraint. More information on this subject is presented in Chapter 4 of The Mandt System®, Trauma Informed Support.

In an article appearing in the Canadian Journal of Psychiatry, Wanda Mohr, RN, Ph.D., Theodore Petti, MD, MPH, and Brian Mohr, MD reviewed the major risk factors associated with the use of physical restraint. A copy of the article in its entirety is on the CD accompanying the trainer material. Their findings were similar to those listed in the CWLA Best Practice Guidelines, with an additional emphasis on the role played by catecholamine (a neurotransmitter released by the adrenal gland during times of stress) in deaths of people (staff as well as people served) after the restraint has ended. Two of the deaths documented by the Hartford Courant occurred after the restraints have ended. Currently, we are aware of four staff deaths in the United States that occurred after the restraint had ended.

Catecholamine may play a role in these deaths, as may another factor discussed by Mohr, Petti and Mohr, known as Rhabdomyolysis. This is defined as “The breakdown of muscle cells results from strenuous exertion, infections, intoxication, deficiency states, prolonged stasis, or trauma” (Mohr, Petti, and Mohr, 2003). The longer a restraint continues, in our opinion, the greater the risk the person is under due to rhabdomyolysis.

Many staff and individuals served are not in “excellent health.” The more people exert themselves, the greater the risk of injury and even death. Catecholamine associated death and rhabdomyolysis can happen to anyone involved in a restraint.

## Risk Factors in Restraint Use - The Mandt System®

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There are many risk factors that come into play when restraint is utilized. One common factor in all the articles written on this subject is that more research is needed. In our opinion, the following factors play a major role in measuring risk:

- **Frequency** – When the frequency of restraints has been reduced, some organizations have reported a decrease in injuries to all concerned. There have been studies published by the National Technical Assistance Center in 2007 showing that when frequency was reduced, injury rates stayed the same or increased slightly. **Frequency of restraint use is only one factor in minimizing the risk of injury. All of the risk factors must be addressed to maximize safety.**
- **Duration** – Duration was also noted as a factor in both of the studies referenced above. In our opinion, duration of restraint may be a major factor in both catecholamine associated restraint death and rhabdomyolysis.
- **Intensity** – The amount of force exerted in applying a restraint is a factor in bruising as well as muscle and ligament strain. We are aware of no studies measuring the role of intensity in injury rates.
- **Design of the restraint** – There are only four ways to manually restrain the human body, not including the use of the floor. They are:
  1. Hold muscle groups away from the body to isolate them and decrease the strength of the individual
  2. Hold muscle groups close to the body to prevent movement of the arms and legs.
  3. Hyperextend joints (also known as “hyperflexion” in the United Kingdom). This prevents limbs, most usually arms, from moving.
  4. Use pressure point and pain techniques.
- **Procedural Attentiveness** - A fifth risk factor, identified in the Child Welfare League of America study discussed later in this chapter, is “procedural attentiveness”. This refers to the degree to which staff maintain the attentiveness to the procedural techniques they were taught. After anyone learns any physical skill, they lose some of that skill unless they practice. This is true in sports, and it is true in other professions. After training, Emergency Room Technicians lost 50% of their skill if they did not practice that skill. (Lattman and Wooley,). Private airline pilots lost a significant amount of skill if they did not practice those skills (Embry-Riddle, 1983). In a review of 53 articles, researchers found “substantial loss with non-practice or non-use”. (Arthur et al, 1998).

To increase skill retention, The Mandt System® requires that staff demonstrate skills at 100% of proficiency so when skill loss does occur, they will have a higher level of retained skill than if the pass level was less than 100%. We also found research done at Concordia University in Montreal (Savion-Lemieux and Penhune, 2004), showing that when people reviewed skills from three days to four weeks after initial training that their skill retention increased significantly. As a result, we **strongly recommend** staff be given the opportunity to review skills 2-4 weeks after their initial training, with quarterly review of non-physical and physical skills.

## Minimizing Risk Factors – The Mandt System®

Some programs that teach physical restraint techniques teach a combination of isolating muscle groups, hyperextension of joints, and the use of pressure points and pain. The physical techniques taught by The Mandt System® are designed to use the minimum amount of force necessary to maintain a restraint. We have chosen to hold muscle groups close to the body, and to always leave at least one limb partially free to maintain range of motion. In The Mandt System®, we prohibit hyperextension of joints and the use of pressure points and pain. To our knowledge, there are no studies that compare injury rates with the type of design of the physical hold. In our opinion, validated by Chris Van Ee, Ph.D., (Van Ee, 2003), a biomedical and biomechanical engineer, the techniques utilized by The Mandt System® are as safe as we can make them.

The British Institute of Learning Disability (BILD) Physical Interventions Handbook (1998) states that holding muscle groups away from the body and hyperflexion of joints have a higher risk of injury associated with these techniques. The use of pressure point and pain is prohibited by BILD, leaving only the method used for over 30 years by The Mandt System®, holding muscle groups close to the body. In addition, the Texas Department of Aging and Disability Services, in Texas Administrative Code (40 TAC 90.3) states “90.42(e) (4) (A)

(A) A facility must not use restraint: in a manner that: (I) obstructs the resident's airway, including the placement of anything in, on, or over the resident's mouth or nose; (II) impairs the resident's breathing by putting pressure on the resident's torso; (III) interferes with the resident's ability to communicate; (IV) extends muscle groups away from each other; (V) uses hyperextension of joints; or (VI) uses pressure points or pain.”

We have also emphasized lowering the duration of restraint throughout Mandt System® training. We teach a number of different concepts; all with the goal of minimizing the expected duration of restraint. We would expect that most manual restraints would have duration of less than 1 minute. Our **recommended maximum time limit for manual restraint is three minutes**. Age, size, weight, position, and duration of the restraint all interact differently with each person to create the person's tolerance for the loss of oxygen (hypoxia) to the brain. For example, in high school and college wrestling, the maximum amount of time people can be involved in intense physical interaction is three minutes, with a mandatory rest period. If this is the maximum for people who are in excellent physical health, the time limits for the rest of us should be lower!

**Special Note to trainers in the state of Georgia:** Regulations governing the provision of residential supports to children in the state of Georgia mandate that the duration of restraint be no longer than 5 minutes per restraint, with a maximum of one hour of total time a person can be restrained in a 24 hour period. In other words, in the state of Georgia a person who has been restrained 12 times for a total of 60 minutes (if the restraint lasted the full five minutes allowed) can not continue to be restrained and must be assessed by a physician to determine what referral, if any, is recommended. The State of Georgia also requires that all children be assessed by a physician who must authorize the use of restraint prior to the imposition of restraint.

Lowering the frequency of restraint use is the third factor we emphasize. We encourage organizations using The Mandt System® to collect data on the frequency of restraint, and then set a goal of reducing the frequency by 50% every year.

## Adult Risk Factors

Generally, age and its natural processes on the human body increase the person's risk for injury or death during physical or mechanical restraint. While adult populations have some different risk factors associated with restraint related injury and death there are also some common factors that the population shares with children. We will examine the risk and safety factors specifically associated with children later in this Chapter.

While specific diseases and small size may place children at special risk, the aging process confers a number of risks as well. Osteoporosis is a common condition usually associated with age, but can also be seen in younger adults. In this condition, fractures can occur with very little trauma and are associated with significant morbidity and mortality. People with osteoporosis are often unaware of their condition and are undiagnosed prior to sustaining a low-trauma fracture.

Those with coronary artery disease and other heart diseases may have very little tolerance for the exertion associated with restraint, resulting in myocardial infarction (heart attack) and arrhythmia that are potentially fatal. Many people have heart conditions without symptoms, such that neither the person nor their healthcare provider has a prior awareness of the condition.

Lung function declines with age even in healthy adults. COPD (emphysema and chronic bronchitis) is common, particularly in smokers, and further diminishes lung function, placing these patients at greater risk for hypoxia and injury from restraint.

These and many other conditions seen in adults can increase the risks associated with restraint. These may be occult, causing no apparent symptoms and thus undiagnosed until physical stress or trauma results in injury or death.

NOTES:

## CWLA Best Practice Guidelines – Behavior Management

**Special Note:** With the permission of the Child Welfare League of America, we have modified the terminology in this section to emphasize that the risk factors and Best Practices are applicable to all settings, including mental health settings, schools, residential services, etc.

The following section of the Chapter is used with special permission from the Child Welfare League of America. Mr. Mandt was privileged to be a Co-Chairman for one of the committees that produced this publication. Child Welfare League of America (2002) Behavior Management CWLA Best Practice Guidelines, 51-70. Washington, DC: Child Welfare League of America.

Restraint is a surprisingly widespread intervention in our society. **While these guidelines focus on the use of restraint for behavioral safety for children and youth, it is important to understand that restraint techniques are used throughout the lifespan, ranging from the use of mechanical restraints in a neonatal intensive care unit to poseys in a hospice or a geriatric medical unit.**

While our focus is on behavioral health issues, restraints are also used in a medical and surgical context, and in the realms of policing, juvenile justice, corrections, and education.

An important distinction is often made between the uses of mechanical restraints for medical, as opposed to behavioral, purposes. While a philosophical distinction can be made, and there are usually physical differences in techniques as well, there is still risk to the person.

Throughout these guidelines, it is stated explicitly that restraint should be used only to prevent severe harm or the risk of severe harm to a person or a person's potential victim. Restraint, however, continues to be used in some cases for different purposes, such as to impose discipline, punish, prevent property destruction, or inflict pain. Restraint is also sometimes applied as a result of inappropriate escalation between caregiver and individual served, and in police and correctional settings as a measure to prevent greater violence.

### ***Restraint Usage***

Restraints are used in the four different realms mentioned earlier: behavioral, medical/surgical, correctional/forensic, and educational. The remainder of this discussion will focus on the use of restraint during behavioral treatments and interventions, in any setting.

Patterns of use are known to vary from provider to provider and from region to region. Intensive tracking of time of use and caregivers involved can reveal patterns of maximum use for individuals and units. Typical findings are that restraint use increases during unstructured time, such as weekends or evenings, or that some caregivers become overwhelmed and resort to the use of restraints before others do.

Within a setting, it is common to find that specific individuals are "high users" who are restrained much more than the average person served. Some individuals in a setting may never be restrained, whereas others are restrained daily or even more frequently.

As the intensity of behavioral disturbance, especially violence, increases, so usually do the intensity, duration and frequency of restraints. As these increase, the risk of injury and death for all people also increases.

## ***Injuries During Restraint***

Injuries during restraint can occur to persons served or caregivers. These range in intensity from minor to severe or even fatal. It should not be assumed that if staff injuries significantly outweigh injuries to the person served, restraint use in any given program is probably appropriate. There are no satisfactory norms for appropriate patterns of restraint use by child, age, or program type.

When the intensity and frequency of aggressive and violent behavior increases and the use of restraint increases, it is expected that the rate of injury will also increase. In any given setting, however, minor and minimal injuries should be predominant; severe, life threatening, or fatal injuries should be nonexistent or rare.

Injuries can affect any system of the body, but those involving the brain, heart, or lungs are especially dangerous. No restraint system, hold, or use pattern is safe for all people at all times. All, even properly applied, can be fatal. The reason is that, negligent practice aside, injuries and fatalities occur because of the interaction between the restraint hold or technique used, the intensity and duration of restraint, the medical condition of the person, and the attentiveness and procedural technique of the restraining caregiver. In general, most or all of these factors have to go awry to cause a life threatening or fatal outcome. The combination of factors dangerous for one person's restraint, however, could be optimal for another person. Simple banning of "forbidden" techniques is not expected to end severe or fatal restraint associated injuries. Some types of injury are known to be particularly prominent during restraint. In younger children, especially, there is vulnerability to joint dislocation and long bone fractures. Techniques exerting pressure on the limbs can cause peripheral nerve injuries. Certain holds can intensify trauma in previously abused individuals.

Restraint associated asphyxia, also known as positional asphyxia, is particularly dangerous because it is a major cause of restraint-associated death. Asphyxia occurs when lack of air intake deprives the person of oxygen. Lack of oxygen, in turn, eventually triggers a cardiac arrest followed by brain death. Prevention is usually as simple as making sure that the restrained person can or is allowed to, breathe. This requires that caregivers be well trained, that the person's medical risk factors have been correctly assessed, and that monitoring during the restraint is appropriate.

Beyond the generalities listed above, there are a host of special conditions that can predispose a person to a dangerous outcome. Examples include hemophilia, which increases the risk of bleeding; asthma, which increases the risk of insufficient oxygenation; and hepatitis, which increases the risk of abdominal injury.

Prescribed and over-the-counter medications and substances may increase the risk of negative outcome. Acute substance-induced intoxication and vomiting are particularly associated with restraint associated asphyxia. Medications for the treatment of asthma can create a predisposition toward vomiting or cardiac arrhythmia. Psychiatric and anti-convulsive medications are often sedative and can increase the risk of asphyxia.

Anything that compresses or restricts the chest or stomach also increases the risk of asphyxia. Common examples include simple obesity and certain types of physical holds. Restraints for the sole purpose of causing pain are ethically indefensible. Techniques should be applied in a way that does not intentionally cause pain.

## **Maximizing and Minimizing Risk**

Because no restraint is completely safe, a best practices approach to restraint is likely to minimize injuries. Once it is accepted that any restraint can cause injury and death and that dangerous outcomes are due to multiple predisposing factors, combined with multiple safety system failures, it becomes clear that the task of increasing restraint safety is one of minimizing risk factors and maximizing safety factors. For any given provider this will require developing its own best practices or adopting best practices developed elsewhere.

## **Factors that Increase Risk of Restraint Associated Injuries**

Since severe injury and death are rare outcomes during restraint, any restraint should be approached with the intent of reducing even further the likelihood of those outcomes. By planning for each person and generating an individualized restraint plan on admission that takes into account his or her personal risk factors; the provider should be able to achieve that goal.

These factors increase the risk of poor outcome during restraint:

- Smaller size
- Younger age
- Previous emotional trauma conditions
- Pregnancy
- Increased duration of restraint
- Psychiatric medications
- Asthma medications
- Overheating
- Chest compression or restriction
- Neck compression or restriction
- Respiratory disease
- Kyphoscoliosis
- Sedation
- Vomiting
- Acute intoxication due to substances
- Inadequate facial monitoring during restraint
- Agitation, exercise, oxygen deficit (demonstrated by increased respiratory rate) just prior to restraint
- Refusing to heed complaints of “I can’t breathe,” or “You’re hurting me,” during restraint – even if it is false and manipulative.
- Larger size
- Obesity
- Child-specific medical or surgical conditions
- Increased intensity of restraint
- Increased frequency of restraint
- Cardiac medications
- Dehydration
- Over exercising
- Abdominal compression or restriction
- Asthma
- Other chest disease
- Other neck or spine disease
- Sedative medications
- Full stomach
- Agitation in restraint

The risk factors above may apply to any of the following restraint techniques:

- Standing restraint
- Prone restraint
- Supine restraint
- Basket holds (never a part of The Mandt System®)
- Physical escorts

## Safety Factors that Decrease Restraint Associated Injuries

The following list includes factors that decrease the risk of injury to a person during restraint. In some jurisdictions, some of these are mandatory. All of them should be useful in reducing the risk of injury and death.

- Provide adequate caregiver ratios.
- Minimize sedation as soon as possible after admission
- Plan for person-specific medical or surgical conditions.
- Develop individualized restraint plans.
- Decrease the duration of restraint.
- Monitor respiration and skin color.
- Prevent overheating.
- Uncover the face.
- Heed any complaint of “I can’t breathe” during restraint – even if it is false and manipulative – and break the restraint.
- Optimize asthma/respiratory status as soon as possible after admission.
- Provide adequate staff training.
- Avoid power struggles.
- Restrain only for safety.
- Decrease the intensity of restraint.
- Decrease the frequency of restraint.
- Maintain hydration.
- Utilize de-escalation preference tools
- Monitor the person’s face during the restraint.

The realization that no restraint or method of applying restraints is always safe for all people is very daunting for caregivers. For those nevertheless required to apply restraints, the goal becomes one of minimizing risk rather than simply doing things “the right way.” **A best practice analysis teaches us that to minimize risk we should avoid unnecessary restraints; minimize restraint frequency, duration, and intensity; avoid certain dangerous practices that have no unique clinical utility; minimize known risk factors; and maximize known safety factors.**

## Medical or Psychiatric Assessments

Numerous medical and psychiatric conditions can pose a danger for a person if he or she were to be physically restrained. If any medical or psychiatric conditions are discovered during the assessment process that could pose a danger to the person, it is strongly recommended that the individual be reassessed by the proper licensed practitioner prior to restraint application.

Each person must be completely assessed before application of any form of restraint to determine that no apparent danger to the person exists. The list of potential medical and psychiatric conditions that could prove to be a danger to a person being restrained is lengthy and impossible to include in its entirety. The list in this section is intended to alert the caregiver to the possibility of negative outcome if no further assessment is obtained before applying a restraint.

A physical assessment and examination by a proper licensed practitioner should be performed before, or at the time of, the person's admission. This assessment should determine whether any preexisting medical illnesses or conditions exist that would prohibit or limit the use of certain restraint techniques. It is further recommended that each provider develop a form to be signed by a licensed practitioner that requires review of restraint and seclusion practices for that person. When an assessment identifies medical illnesses and conditions that indicate risk, the results should be communicated to all staff members. The person's individual restraint plan must identify prescriptive interventions that minimize risk and any interventions that are prohibited for that person.

Assessment is the key to best practice when that practice involves restraint. Individuals must be assessed continuously for any conditions that would place them in imminent danger while being restrained. Therefore, policies and procedures need to reflect a thorough assessment process before supplying any form of restraint.

An individual who becomes agitated during physical or mechanical restraint or seclusion is under a great deal of physical stress and may exhibit signs of that distress. In order to minimize risk and harm to individuals, a provider should train all caregivers to use specific monitoring procedures that assess for any sign of distress. Table 1 was developed to assist providers in developing policies and procedures. It reviews, by bodily system, the signs of distress.

**[Special Note:** in Georgia and Wyoming, new regulations which became effective in 2007, require a medical examination of any individual who may be subject to restraint, in order to ensure there are no pre-existing medical conditions which predispose the individual to increased risk of injury due to the use of restraint. In our opinion, this practice should be standard procedure in all settings where individuals are served for extended periods of time. In settings where individuals are served briefly (less than 72 hours) this may not be possible.]

**Table 1: Restraint Responses that Indicate Distress**

SYSTEM	SIGNS OF DISTRESS
<b>Circulatory</b>	Extremities are cold to the touch Blue tinge to nail beds Blue tinge to the area around the mouth Flushed or ashen face
<b>Respiratory</b>	Rapid, shallow breathing Panting Grunting Blue tinge to nail beds Blue tinge to the area around the mouth Nasal flaring Absence of breathing
<b>Neurological</b>	Confusion/disorientation Seizure Vomiting Difficulty breathing Unconsciousness Unequal pupil size Headaches
<b>Gastrointestinal</b>	Vomiting Constipation Diarrhea
<b>Musculoskeletal</b>	Joint swelling Pain Redness Bruising

Table 2 reviews risks and concerns by restraint position. Providers should review this table to further enhance education of caregivers about monitoring techniques. Special consideration should be given to the size and weight of the individual(s) restraining, in relation to the size and weight of the individual being restrained – based on the risk and concerns outlined in Table 2.

Table 2: Positional Risk

POSITION	RISK CONCERN
<b><i>Standing</i></b>	Breathing may be restricted. Possibility of bruises, strained muscles, or other musculoskeletal injuries. Person(s) initiating the restraint may exert too much pressure or be too forceful.
<b><i>Sitting</i></b>	Breathing may be restricted. Cardiac and/or respiratory arrest. Possibility of neck and back injuries. Possibility of bruises, strained muscles, or other musculoskeletal injuries. Person(s) initiating the restraint may exert too much pressure or be too forceful, particularly over the neck or spine. If chair is used, chair may overturn.
<b><i>Prone (Face-down)</i></b>	Possibility of abrasions, bruises, or other musculoskeletal injuries, particularly to the face. Possibility of neck and back injuries. Difficulty breathing, including respiratory arrest and aspiration if the person vomits. Cardiac arrest. Decreased circulation to lower extremities Surface of floor may not be padded. Person(s) initiating the restraint may exert too much pressure or be too forceful, particularly over the chest and neck, or may place too much weight on the limb or joint. Person being restrained may bang head or struggle against hold. Note: obese individuals are more susceptible to these risks.
<b><i>Supine (Face-up)</i></b>	Possibility of abrasions, bruises, strained muscles, or other musculoskeletal injuries. Difficulty breathing, including respiratory arrest. Possibility of aspiration if individual vomits. Possibility of biting self. Surface of floor may not be padded. Person(s) initiating the restraint may exert too much pressure or be too forceful, particularly over the chest and neck, or may place too much weight on a limb or joint. Person being restrained may struggle against hold.

## **Emergency Response to Restraint-Precipitated Emergencies**

Even the most professional behavior management interventions can sometimes lead to accidents for which emergency medical assistance is required. Providers must establish emergency response protocols to be used in conjunction with behavior management interventions.

Protocols should include the following areas:

### ***Internal Response***

- Because behavior management incidents are often unpredictable and many times very short in duration, medical personnel may not be immediately available. Thus, caregivers should be certified in First Aid and CPR and trained in health issues related to the use of restraint and seclusion. They should also be knowledgeable about any medical conditions unique to individuals in their care that prohibit the use of physical intervention.
- Incidents that include the use of behavior interventions that physically restrict the individual should prompt communication with available internal medical resources for support as necessary.
- When possible, available internal medical personnel should monitor incidents in which physically restrictive interventions are employed.
- Staff members identified as medical resources should have the authority to continue or stop a specific intervention based on health issues.
- Internal medical personnel should examine individuals as soon as possible after the incident has ended, when such examination is deemed necessary.
- The follow-up medical assessment should prompt outside medical assessment and treatment, as necessary.
- Universal precautions should be employed.

### ***External Response***

- In advance of a medical emergency, external medical personnel should be identified, and emergency assistance procedures with these resources should be established. Procedures should include communication, transportation, agency access, and back-up in case the identified personnel are unavailable and follow-up review.
- Medical records, parental permission, and insurance information must be available for use by external resources. Providers are advised to create medical summaries that include the above information for all individuals. All staff should know how to access this information when needed.
- Judgment about requesting external assistance should rest with the staff involved in the incident and/or the identified internal medical resource. Requests for external assistance should be based on assessment of the individual's current health status.
- Emergency response protocol should also include procedures to guarantee communication with the individual's parent or guardian and with licensing authority, as required by statute or regulation.
- A provider representative should accompany individuals who are transported to an external emergency resource.

## ***Follow-Up***

- Emergency response protocols should include requirements to communicate with staff regarding the emergency. Initially, such communication should be general information, to respect confidentiality issues as well as protect the integrity of the investigation.
- Communication with the public (press, news media) should follow established procedure. One person should be identified as the provider's spokesperson.

We again want to thank the Child Welfare League of America for allowing us to use the preceding information.

## **Special Risks in Restraining Small Children**

In the chapter which teaches the use of restraint (Chapter 10) we state that, in our opinion, "children under the age of 5 should not be restrained at all unless their behavior is so dangerous that to not use a physical restraint would be more dangerous than to impose one." Children, especially those under the age of five, can easily dislocate joints because their bone and ligament structures are, in layman's terms, more elastic than in older children and adults.

All states have regulations to addressing the use of restraint to protect the health and safety of individuals served. However, these regulations have not kept people safe, as evidenced by the report from the United States of America's General Accounting Office estimating that 150 people per year die as a result of the use or misuse of restraint.

The following quote from Texas illustrates this point:

In an investigative report on the risks of restraint to children, Carole Keeton Strayhorn, the Texas Comptroller of Public Accounts, wrote the following:

*"Two Texas foster children died during or soon after restraint in fiscal 2000. In addition, a 2001 death at a residential treatment facility, labeled an accident, also occurred after physical restraint. One foster child who died in fiscal 2002 did so after several employees restrained her at a residential treatment center; another died after a restraint at a school. Two children who were not foster children also died in residential childcare in fiscal 2003 after being restrained."<sup>9</sup>*

*Texas' licensing standards and their enforcement do not adequately protect children from death and injury from restraints. Although the standards prohibit certain restraint actions, such as placing a child face down and placing pressure on the child's back, these standards have not been sufficient to prevent deaths and injuries."<sup>10</sup>*

*In addition to these deaths, DPRS found 155 licensing violations related to physical restraint in residential facilities while investigating abuse complaints in fiscal 2003, including injuries, inappropriate or excessive restraints and inadequate training or supervision. Most occurred in residential treatment centers, which treat many children with severe behavioral problems."<sup>11</sup>*

Retrieved from <http://www.window.state.tx.us/forgottenchildren/ch05/s0505.html> November 8, 2005

**Regulations do not keep people safe, relationships do.** This was highlighted in Chapter 1 with the quote from Dr. Peter Breggin (1999), and needs to be continually emphasized. Chapter 1 is the most important chapter we teach!

## **Risks of Injury to Staff**

The information presented by the Child Welfare League of America (CWLA) does an excellent job of reviewing the risks of injury to people served. In studies by CWLA and the Texas Department of Mental Health (TDMH, 2003), staff are injured at approximately twice the rate of individuals served. In their article, Mohr, Petti and Mohr (2003) state that over half the injuries sustained by staff in human service settings are the result of the use of restraint.

## **The Psychological and Emotional Risks of Restraint**

The use of restraint has been shown to traumatize as well as retraumatize people served in mental health settings, both for adults and children. Research by the National Association of State Mental Health Program Directors (NASMHPD, 1999, 2003) has clearly demonstrated this linkage. This area is more fully explored in Chapter 4 of The Mandt System®, Trauma Informed Services.

In a recent training, one staff person in a Residential Treatment Center for children said she had been traumatized both physically and emotionally due to her role in using restraint. She said that she had been injured physically, and also had to seek counseling for the trauma she suffered emotionally. She said she was embarrassed to tell people that she restrained children at work, especially when the restraints lasted for hours.

No one comes to work, in our opinion, wanting to hurt other people or to be hurt themselves. The trauma suffered due to injuries and deaths incurred as a result of restraint can be long lasting for staff. The authors had the difficult responsibility of observing a video, taken by a security camera, of a restraint death. The staff person was visibly shaken by the experience, and the child died. The staff involved in the restraint is under investigation for possible criminal charges. Criminal charges have been filed in Georgia and Iowa against staff who had restrained people in which the individuals died. The trauma associated with this goes beyond any criminal charges; the staff live with the knowledge of their actions every day.

## Conclusion

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In any restraint situation the risk of harm to people involved is always a concern. Continuous assessment of the person's response to being restrained is extremely important. It has been our experience that failure to monitor and adjust the restraint has caused severe injury and death to the person.

David Mandt and Associates has collected literature and experience over the past 30 years in the development of the physical techniques used in the training. We are especially concerned with the prevention of restraint related deaths. Restraint related death can be prevented. We require that everyone who uses the technical (physical) skills in the Mandt System must complete this Chapter prior to being trained in any of the physical skills (Technical Chapters) taught in the system. We also strongly recommend that everyone who is trained in the physical techniques of the Mandt System also have First Aid and CPR training.

In all the restraint techniques taught in the Mandt System an "Observer" is recommended as part of the team approach. Observers can provide detection of trauma related responses shown by people who are being restrained. Monitoring temperature, pulse, respiration, blood pressure, level of consciousness, level of agitation, mental status, skin color, skin integrity, temperature of extremities, swelling of extremities, and movement of extremities are all important in our efforts to reduce the risk of serious injury or death. Observers should be trained in First Aid, CPR, and precautions described in this Chapter prior to being assigned as an observer.

# Self-Study Guide

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These self-study questions are provided to give you an opportunity to gauge your understanding of this chapter. Some or all of these questions may be used on the final exam.

1. List six possible signs of distress due to restraint use: (p187, S19-20)

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2. List six factors that increase the risk of restraint associated injury: (p184, S14)

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3. List six safety factors the CWLA notes that decrease restraint associated injuries: (p185, S15-16)

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4. List four safety factors The Mandt System® addresses to minimize the risk of restraint associated injuries: (p179, S9-10)

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5. **Fill in the Blanks** (one word each): The maximum recommended time a person should be restrained according to The Mandt System is \_\_\_\_\_ minutes. (p180, S9)

6. **Fill in the Blanks** (one word each): \_\_\_\_\_  
\_\_\_\_\_ is when the position of the restraint inhibits the ability of the person to breathe. (p183, S10)

7. **Circle the correct answer(s) that apply:** A best practice analysis teaches us that to minimize risk we should: (p186, S17-18)

- a. Have all caregivers trained to use specific monitoring procedures that assess for any signs of distress
- b. Have individuals evaluated by a Physician prior to the implementation of restraint
- c. Avoid certain dangerous practices that have higher risks to safety
- d. Maximize known safety factors